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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,632	10/15/2003	Martin Kin-Fei Lee	131135-1	2631

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EXAMINER	
EVANS, GEOFFREY S	
ART UNIT	**PAPER NUMBER**
1725	

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/605,632	LEE ET AL.	
	Examiner	Art Unit	
	Geoffrey S Evans	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *20031015*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The abstract of the disclosure is objected to because the word "comprising" (two instances) is legal phraseology. Also the abstract should be more detailed as to what is novel. Correction is required. See MPEP § 608.01(b).

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,7,29,30,32 are rejected under 35 U.S.C. 102(b) as being anticipated by Nicholas et al. in U.S. Patent No. 4,549,061. Nicholas et al. discloses a discharge machining head assembly (element 14), and an electromagnet (element 140; see figure 7 and column 5,lines 51 to 60).

4. Claims 29,30,32 rejected under 35 U.S.C. 102(b) as being anticipated by Houman et al. in U.S. Patent No. 5,618,449. Houman et al. discloses a tool electrode (element 23), a machining head (element 14), and using magnetic attraction (see column 14,lines 41-41) to attach the machine tool to the workpiece.

5. Claims 10,11,14 are rejected under 35 U.S.C. 102(b) as being anticipated by Shibata et al. in Japan Patent No. 2-30,421. Shibata et al. discloses an electric discharge machine with a discharge machining head assembly (element 34) and a head assembly adaptor plate (element 39, see figure 2) that is configured for coupling to a multi-axis robot arm.

6. Claim 27 is rejected under 35 U.S.C. 102(b) as being anticipated by Cammann et al. in U.S. Patent No. 4,259,562. Cammann et al. discloses a bushing (element 49), an insulated annulus (element 61) located in the bushing and a bushing holder (element 24) coupled to the bushing (see figure 3 and column 2,line 59 to column 3,line 58).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 2,3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholas et al. in U.S. Patent No. 4,549,061. The size of the dimensions of the head assembly is a matter of design choice since the apparatus of Nicholas et al. and the instant application act the same way (i.e. perform discharge machining). See Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984). Additionally the size of the diameter hole is a matter of choice depending upon the size of the electrode.

9. Claims 4, 5,6,31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholas et al. in U.S. Patent No. 4,549,061 in view of Roach in U.S. Patent No. 3,806,691. Roach teaches three manual axis slides controlled by three handwheels (elements 35,49,79; see column 3,line 10 to column 4,line 12) to provide three axes of adjustment. Additionally, Roach discloses tilting (see figures 2 and 8) using a swivel and tilt device (see element 125 in figure 10) and that the head can have its position adjusted using motor 22 for a total of 5 axes of movement. It would have been obvious

to adapt Nicholas in view of Roach to provide this to flexibly adjust the positioning of the electrode relative to the workpiece.

10. Claims 8 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholas et al. in U.S. Patent No. 4,549,061 in view of Inoue in U.S. Patent No. 3,417,006 B1. Inoue teaches that electrochemical machining is faster than electric discharge machining (see column 1). It would have been obvious to adapt Nicholas et al. in view of Inoue to provide this to more quickly machine the holes.

11. Claims 12,13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al. in Japan Patent No. 2-30,421. The size of the dimensions of the head assembly is a matter of design choice since the apparatus of Shibata et al. and the instant application act the same way (i.e. perform discharge machining). See Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984). Additionally the size of the diameter hole is a matter of choice depending upon the size of the electrode.

12. Claims 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al. in Japan Patent No. 2-30,421 in view of Inoue in U.S. Patent No. 3,417,006. Inoue teaches that electrochemical machining is faster than electric discharge machining (see column 1). It would have been obvious to adapt Shibata et al. in view of Inoue to provide this to more quickly machine the holes. Regarding claim 20, the size of the dimensions of the head assembly is a matter of design choice since the apparatus of Shibata et al. and the instant application act the same way (i.e. perform

discharge machining). See Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984).

13. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cammann et al. in U.S. Patent No. 4,259,562 in view of Thompson in U.S. Patent No. 5,861,608. Thompson teaches using a magnet to support an EDM cutting machine. It would have been obvious to adapt Cammann et al. in view of Thompson to provide this to support the apparatus in a tubular workpiece.

14. Claims 17,18,19,21-24,26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al. in Japan Patent No. 2-30,421 in view of Roach in U.S. Patent No. 3,806,691. Shibata et al. has a discharge machine head assembly (element 22) coupled to a multi-axis robot arm but does not disclose a sliding assembly coupled to the discharge machining head assembly. Roach teaches a sliding assembly (element 38) coupled to a discharge machine head assembly (element 43A; see column 3,lines 10-19) and a swivel and tilt device (element 125 in figure 10). It would have been obvious to adapt Shibata et al. in view of Roach to provide a slide assembly to increase machining flexibility. Regarding claims 19 and 20, the size of the dimensions of the head assembly is a matter of design choice since the apparatus of Shibata et al. and the instant application act the same way (i.e. perform discharge machining). See Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984). The size of the hole is also a matter of design choice depending upon the size of the electrode used.

15. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al. in view of Roach as applied to claim 17 above, and further in view of Inoue in U.S. Patent No. 3,417,006. Inoue teaches that electrochemical machining is faster than electric discharge machining (see column 1). It would have been obvious to adapt Shibata et al. in view of Roach and Inoue to provide this to more quickly machine the holes.

16. Claim 34 is rejected under 35 U.S.C. 103(a) as being obvious over Nicholas et al. in U.S. Patent No. 4,549,061 in view of Fischer et al. in U.S. Patent No. 6,509,539. Fischer et al. teaches drilling out a stator pin blade(see figure 1) using an electric discharge machining electrode tool. It would have been obvious to adapt Nicholas et al. in view of Fischer et al. to provide this to remove the stator blade pin.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer

in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey S Evans whose telephone number is (571)-272-1174. The examiner can normally be reached on Mon-Fri 6:30AM to 4:00 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571)-272-1171. The fax phone number for the organization where this application or proceeding is assigned is (703)-872-9306.

GSE

Geoffrey S. Evans
Primary Examiner
Group 1700